ANIMAL HUSBANDRY AND VETERINARY SCIENCE
Paper – I

Question Paper Specific Instructions

Please read each of the following instructions carefully before attempting questions:

There are EIGHT questions in all, out of which FIVE are to be attempted.

Questions no. 1 and 5 are compulsory. Out of the remaining SIX questions, THREE are to be attempted selecting at least ONE question from each of the two Sections A and B.

Attempts of questions shall be counted in sequential order. Unless struck off, attempt of a question shall be counted even if attempted partly. Any page or portion of the page left blank in the Question-cum-Answer Booklet must be clearly struck off.

All questions carry equal marks. The number of marks carried by a question/part is indicated against it.

Answers must be written in ENGLISH only.

Neat sketches may be drawn, wherever required.

SECTION A

Q1. Write short notes on the following: 8×5=40

(a) Resemblance between relatives 8
(b) Hormonal control of mammary gland development 8
(c) Starch equivalent 8
(d) Biological value 8
(e) Herd recording 8
Q2. (a) What do you mean by feeding experiments? How can digestibility of maize fodder be determined in bullocks?  
(b) An adult sheep ate 2 kg berseem hay containing 90% dry matter and 12% crude protein and excreted 3 kg faeces containing 30% dry matter and 1.5% crude protein. Calculate the digestibility coefficient of dry matter and crude protein of berseem hay.  
(c) Write the deficiency symptoms of Vitamin E in poultry.
Q3. (a) What is grading-up? Explain the advantages and limitations of grading-up in cattle.  
(b) Explain Mendel's law of independent assortment with the help of a checker board.
Q4. (a) Explain pre-natal and post-natal growth. How is the body weight gain estimated from body measurements? Enumerate the factors affecting the growth of animals.  
(b) Discuss the functions of stomach and liver in ruminants.
Q5. Differentiate between the following:  
8x5=40
(a) Qualitative and Quantitative characters  
(b) Crude protein and True protein  
(c) Group feeding and Individual feeding  
(d) Outcrossing and Top crossing  
(e) Flushing and Fattening  

Q6. (a) Enumerate the factors affecting the efficiency of a dairy cow. What is personnel management? Write the functions of management.  
10+5+5=20  
(b) Work out a cropping scheme and determine the land requirement for ensuring the supply of green fodder round the year for a herd of 50 cows and their followers.  
20  

Q7. (a) Discuss the feeding schedule for a buffalo calf from birth to 3 months age.  
15  
(b) Write the interrelationships between minerals and vitamins.  
15  
(c) What is calorie:protein ratio? Write the energy and protein requirements of broilers as per BIS.  
10  

Q8. (a) What is heterosis? Explain the genetic basis of heterosis.  
15  
(b) Calculate the heterotic effect in F₁ and F₂ progenies considering the milk yield in 300 days of Sahiwal and Holstein-Friesian cows as 1600 kg and 5600 kg, respectively, and of their F₁ crossbreeds as 3900 kg.  
10  
(c) What do you mean by cross-breeding? Discuss the various types of cross-breeding. Write the merits and demerits of cross-breeding.  
3+6+6=15